Weak Link Vulcanization: A New Approach to Lower Temperature, Higher Efficiency Crosslinking

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Invention

A new high sulfur content polymer has been developed for tire vulcanization. This polymer may improve chemical compatibility, mixing, and result in more efficient crosslinking.

Background

Sulfur, the traditional vulcanizing agent for tire rubber, is largely insoluble in rubber precursors and requires high temperatures to form crosslinks. Even with high temperatures, the crosslinking may be suboptimal with respect to addition of crosslinking agent.

Applications

Tire rubber vulcanization.

Advantages

Improved solubility in tire rubber precursors compared to elemental sulfur and improved crosslinking.

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